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Shifting perceptions: Establishing an Earth Building Organisation in the UK

Theme 6

Knowledge transfer and capacity building

SUMMARY

The UK has a rich heritage of earthen buildings and recently a renewed interest in the use for contemporary construction. It is estimated that the UK has thousands of earth buildings including residential, educational, commercial and religious buildings built with a wide range of earth techniques. However earth building is relatively unknown within the construction industry and there is lack of awareness across all construction professions, funders and insurers; all key parties to further adoption of earthen building materials.

This paper will review the establishment of the UK's national earth building organisation, commenting retrospectively on the successes and challenges. As a new organisation with no natural geographic centre and widespread voluntary human resources we have been shaped by projects led by passionate individuals. The project approach has also been supported from within the group. We also discuss the need for developing the organisation as a charity (NGO). This change of governance also grew from our project based approach. Similar national organisations in other countries may benefit from this review which we hope will help achieve our objective of the growth and awareness of earthen construction.

1. INTRODUCTION

While the UK has a rich heritage of earth construction and growing number of contemporary buildings, it remains obscure. To address this a national association was established to grow and raise awareness of earth construction. This paper discusses the need for a national association for earth building and the associated success and challenges faced in the UK as a case study. Its particular path to growth as an effective body may help encourage or grow other national organisations.

The context for people working in earth building in a variety of capacities including; builder, designer, academic or local authority is typically working in isolation. In a project there is often only one perceived 'expert' in earthen construction. Sharing knowledge and experience within a community of earth builders and professions with the support of academia changes how the sector operates from a personal and regulatory perspective. Within the UK an association was developed with encouragement particularly from German DVL. People working in isolation may lack the confidence to come together,

particularly when engaged in a practice which has a low threshold of understanding or respect from the industry or society it is operating within.

The focus on earth as locally available resource, a perception of reduced cost , a growing understanding of hygrothermal benefits of earth used in buildings have all contributed to the renewed interest in earth as a modern building material. The growing interest demanded a networking hub for all involved in earth construction. This paper discusses the development of the national organisation into a multi-functional, trans-national charity (NGO). The objective of this paper is to offer a case study of the development of the organisation aimed at increasing awareness of earthen construction in the UK.

2. UK Context

The wider picture of construction in the UK has been wide-scale use of high energy building materials which fit into the general classification of products. The commercial success of products over skills has been a feature of construction which makes it both extremely profitable as a sector and highly vulnerable to wider economic shocks (Duca et al., 2010 and Nistorescu et al., 2010) Products have led to the growth of standards and certification and the impact on the socio-economic landscape (Turk 2009 and Nistorescu & Ploscaru, 2010) including the dilution of skills-based construction sector.

There has been a growing recognition of the environmental impact of construction. Currently a quarter of the global carbon emissions can be attributed to the construction and occupation of building (Metz and Davidson, 2007) with 10% of all CO_2 coming from cement production alone (Environmental Assessment Agency, 2014). The UK government has recognised this challenge and has set targets for all buildings to be carbon neutral by 2019 with domestic buildings needing to meet this requirement by 2016. Current regulations for carbon neutral buildings relates to operational energy, but this may change in the future.

Meanwhile earth building in the UK has as long a history (Morton, 2007) as most other areas of the world (Houben& Guillaud, 1994). The use of earth as a building material was largely vernacular, with whole towns in the UK constructed of locally sourced clay with regional variations of cob, clay mortared clay and stone blocks, wattle and daub and rammed earth. This practice continued until the industrial revolution from the 18th to the 20th century. Industrialisation and mass transport had a massive impact on earth building with a dwindling number of people with the skills to use it. This was in stark contrast to the idea of 'modern' construction materials and a ‘modern’ architecture. However the existence of thousands of earth buildings ensured it remained current for a range of different people. These included those living and maintaining the buildings, local authorities, NGO’s and government concerned with the protection of UK heritage. While new build in the UK and Ireland has largely been with cob and earthen plasters other skills in wattle and daub and clay mortared masonry are also gaining use and interest. Rammed earth has attracted interest in highly contemporary designs such as the CAT centre at Wise as in Fig. 1. Maskell et al., (2015) has demonstrated the potential for earth to be used as a structural material potentially meeting certification requirements whilst delivering significant environmental benefits.

figure 1: Contemporary Rammed Earth at WISE, Wales

3. DEVELOPMENT OF THE UK AND IRELAND'S NATIONAL ORGANISATION

3.1 Establishing the need

With heritage issues and growing interest in new earth construction in the UK and Ireland, there was a need to establish the scope of interest from a range of interest groups. Within the UK this began with a practitioner, an academic and an architect each inviting their own contact group to a meeting. That meeting had two main themes: is a national organisation necessary and if so what form should it take. That early discussion became the de-facto constitution of EBUKI.

The meeting recognised that while there is interest in earth building across all design, build and academia areas none of them have the interest to support a national body. Further, a national body without representation from all interested parties would lack the skills needed to understand all of the elements of earth building. Both conservation and new build groups have increased their understanding and activities over the past 20 years. Conservation builders, designers and researchers have had a tremendous impact on the building industry with the 'rediscovery' of lime which has not only had a beneficial effect on conservation but also in new build. Likewise the new build group have tested the interest for earth buildings, including within the regulators that control the sector.

3.2 Establishing an effective body

Initially the organisation lacked a coherent or effective means to meet, act and move forward. Having formed an association the skills to operate it may not necessarily exist within the body of people who have recognised the need for it. In the UK's case having started there was a period of existing in theory but struggling to organise and act together.

An early success in building the organisation was first one, then a series of annual conferences. It was through conferences that networking between the different disciplines was facilitated and the years activities disseminated. EBUKI was and remains a group of highly committed individuals who are geographically wide spread; meeting requires both time and money. The conference allowed both company law to be respected as it was the Annual General Meeting, and the annual event for Directors to meet all together face to face.

The annual conference generates a financial surplus, initially EBUKI's working capital. It was not enough but with some creativity the organisation started to represent itself at trade shows, to regional earth building groups, on the internet and social media. These are low cost actions which show who in the organisation is willing and able to be active and bring about change.

3.3 Overcoming management issues

For a national organisation to function and have impact representation is required from across the country, issues in different areas lead to diverse challenges and possibilities. However, representation from across a country imposes significant logistical challenges for meeting and moving the organisation forward.

Recognising the need for a core group to speak on a regular basis resulted in monthly conference calls. The technology allowing regular meetings together across the country fundamentally changed the organisation. Technology in this case is a significant means to operate nationally but at ultra-low cost. This is something which is replicable in many parts

of the world.Conference allowed yearly group discussion of strategic issues such as company structure and future planning but the monthly skype considers tactical issues, upcoming activities and responding to a dynamic membership. As funds increased the executives were able to meet face to face more often, a vital change.

Initially the executive group was self-selected, people working professionally, as practitioners or academics. It took time to understand there needs to be a 'honeymoon' for new executives to ensure they are a 'good fit' for the organisation and find the role fulfilling. Organising a not–for-profit national group uses different skills to those in practice or academia. While intention to help is always appreciated, only delivered actions achieve results.

3.4 Gaining charitable status

The constraints of the UK company and tax structures also played a role in organisational effectiveness. As a membership organisation the two initial lines of funding were membership and conference fees. January and February, a good time for conference and membership renewal, is just before the end of the UK tax year. So money the organisation had earned had to be spent or paid in tax. The focus to become a tax exempt registered charity or NGO had impacts beyond just financial ones. In the UK organisations need £5,000 to obtain tax free status and the route to this funding changed our understanding of what a national organisation status could do for us.

EBUKI were approached by a group of European earth building organisations working on the European Credit for Vocational Education & Training system (ECVET), what became the Pirate Project (ecvetearth.hypotheses.org). This project developed training standards, allowing EBUKI to participate in a project which is changing the landscape of European and UK earth building training. Pirate also brought the working capital to gain tax free status and was the first opportunity to pay part time staff. This changed the structure of EBUKI from purely volunteer directors to paid and unpaid executives.

The changes in the organisation have been a mix of reactive and pro-active, with one activity triggering another. Invitation to join one project has led to change in tax and employment for the organisation, leading in turn to more possibilities for further collaboration and project proposals. Without the vehicle of a national organisation none of these activities could be considered as they require the support of a range of skills and member organisations to realise. In turn the members need the support of the organisation to allow wider ranging projects to be considered.

3.5 Project led approach

Changes to EBUKI's structure allowed for a greater focus on projects, championed by the executive, but with support the members. The projects to date have been widespread, including website development, mapping Earth buildings in the UK, development of training and standards and a way to measure progress.

As the ECVET project has developed there has been an increasing focus on the outputs. A key output of the Pirate project was the 'Units of Learning Outcomes'. EBUKI approached the UK Construction Industry Training Board (CITB) proposing a change to the UK National Occupational Standard (NOS). This has significant impact on vocational training within the UK. EBUKI was uniquely positioned as experts on the CITB Technical

Committee (TC), as a professional organisation to 'the industry' and achieving a nationally recognised training standard.

In 2013 EBUKI were invited to Craterres Grains d'Isere festival of earth building. EBUKI were invited again in 2014 and encouraged to host Clayfest in 2015, a workshop based event combined with our annual conference. EBUKI's conference has always moved around the country, reaching out to different groups offering support where it can. Clayfest will also move around the country, seeing local practice demonstrated rather than on a screen. Earth builders are reluctant to travel far to such events, going to them means seeing local practice and meeting local practitioners too, a vital part of the process of stimulating earth building.

fig 3 Clayfest was a very effective means to meet, market, share, network

3.6 Regional Groups

There are existing regional earth building groups in the UK, notably the Devon Earth Building Association (DEBA), the East Anglian Regional Telluric Houses Association (EARTHA) and the East Midlands Earth Structures Society (EMESS). Each has existed for some time with committed older members. EBUKI seeks to help these regional groups grow a younger membership; developing a strong group of regional organisations affiliated to EBUKI or directly as part of EBUKI, such as the newly formed Scotland group.

EBUKI were approached by interested builders in Ireland first to speak at conference, then to have an Executive role and finally to bring Ireland into the organisation. This led to renaming the organisation, but posed challenges to the brand that EBUKI had established. The legal registration of the name change required UK Governmental approval for the use of Ireland in the title. Cross border issues continue to arise, the different currencies, training structures and regulatory frameworks. Each of these will be met through the experience in EBUKI which also gains new international expertise. November 2015 saw Ireland host the inaugural EBUKI Ireland conference; a chance for promotion and development of earth building in Ireland similar to the establishment of the original EBUKI and development of other regional UK groups

4 CONCLUSIONS

EBUKI has grown as an organisation in the six years since our founding. Growth has allowed us to think about our goals more clearly and plan and organise more effectively. This has been an organic process and one which has brought us in contact with local, regional, national and international opportunities and challenges.

Without a national organisation reaching out to professional bodies, user groups, contractors, local government and standards bodies would not have happened. To change the National Occupational Standard and approach training colleges with the new standard would all have been pipe dreams. Similarly the work we are doing connecting regional groups and re-invigorating them would not be possible.

Our connection with a whole European network has come about through forming as a national body. We have had valuable insights and support from a number of them. Not only has this reshaped our organisation and its thinking, funding and planning, it has shown us that where countries don't have a similar organisation making connections is

much harder. And the benefits of sharing our knowledge, joining together to change the rules to allow earth building remain more distant.

Europe has a high proportion of the existing national earth building organisations. These have become more successful in cooperation and collaboration. Globally this is far from the norm and as such further international cooperation will be harder to foster and sustain. In the case of much of Africa there are thousands, if not hundreds of thousands working with earth building and who remain isolated and unrepresented within national boundaries. With national associations' people who need training in earth detailing and design, marketing and business could benefit and have greater impact on home markets and in international cooperation.

EBUKI is a growing organisation with clear, but grand aims and objectives. From the development of EBUKI we have seen that only with the formation of a national association can the development of earth building can really progress. Collaboration at local, national, regional and international level has proven to be a key driver for success.

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